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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,487	12/11/2001	Tong Sun	KCC-16,156	5645

35844 7590 05/06/2003

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EXAMINER

KUMAR, PREETI

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/017,487

Applicant(s)

SUN ET AL.

Examiner

Preeti Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-75 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Request for Reconsideration***

1. Claims 1-75 are pending.
2. The rejection of claims 20-23 under 35 U.S.C. 112, second paragraph is withdrawn upon further review and consideration.
3. The rejection of claims 1-4, 7-27, 30-52, 54-75 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dutkiewicz et al. (US 5,834,095) is withdrawn upon further review and consideration. Specifically, Dutkiewicz et al. do not specifically teach or suggest the utility of the same polymeric reactive compounds as recited by the instant claim 1.
4. The rejection of claims 1-75 are rejected under 35 U.S.C. 103(a) as obvious over Herron et al. (US 5,137,537) is maintained for the reason recited in the previous office action and further explained below.

### ***Response to Arguments***

5. Applicant's arguments filed March 3, 2003 have been fully considered but they are not persuasive.

Applicants urge that the prior art do not disclose or suggest structurally modifying the cellulosic fiber by use of an intra-crystalline swelling agent to induce curl and do not disclose or suggest stabilizing the curled fiber with a polymeric reactive compound.

Specifically regarding the teachings of Herron et al., please see col.18, ln.27-42, where Herron et al. teach examples of hydrogel-forming materials which may be used such as a partially neutralized polyacrylic acid and a partially neutralized acrylic acid

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grafted starch. Also as stated in the previous office action, example 1 illustrates the utility of 50% sodium hydroxide solution in a steeping step. See col.23, ln.67-col.24, ln.3.

Although Herron et al. do not specifically use the terminology of intra-crystalline swelling, Herron et al. do suggest a process of making individualized, crosslinked fibers using citric acid and sodium hydroxide to produce individualized crosslinked cellulosic fibers having water retention values encompassed within the broad range as recited by the instant claims.

Specifically regarding the argument that Herron et al. do not teach or suggest applying an intra-crystalline swelling agent to the fibers to impart curl to the fiber, the Examiner draws attention to col.10, ln. 25-60, where Herron et al. teach that the fibers are curled. Specifically, Herron et al. teach that maintaining the fibers in substantially individual form during drying and crosslinking allows the fibers to twist during drying and thereby be crosslinked in such twisted, curled state. Also, in example I, Herron et al. illustrate in steps 2 and 3, that the fibers are treated with sodium hydroxide and carboxylic acid and then in step 4, Herron et al. illustrate that as the individualized fibers exit the refiner, they are flash dried with hot air in two vertical tubes in order to provide fiber twist and curl. See col.24, ln.19-21.

### ***Conclusion***

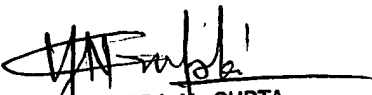
6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 703-305-0178. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on 703-308-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-872-9309.

  
YOGENDRA N. GUPTA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

Preeti Kumar  
Examiner  
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PK

May 2, 2003



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